## What is claimed is:

1. A method for adjusting a transmission rate of a wireless communication system comprising a transmitter and a receiver, the method comprising:

transmitting a plurality of transmitted packets at the transmission rate by the transmitter;

receiving a plurality of received packets corresponding to the transmitted packets by the receiver;

determining a state parameter according to at least a characteristic determined by the transmitted packets and the received packets; and

adjusting the transmission rate according to the state parameter.

2. The method of claim 1 wherein the characteristic is determined according to a number of the transmitted packets and a number of the received packets.

3. The method of claim 2 wherein the state parameter is a ratio determined by dividing the number of the received packets with the number of the transmitted packets.

4. The method of claim 1 wherein the characteristic is determined according to the signal strength of the received packets.

5. The method of claim 4 wherein the state parameter is a value corresponding to the signal strength of the received packets.

6. The method of claim 1 wherein the adjusting step is performed according to a comparison result of the state parameter and at least a threshold value.

7. The method of claim 6 wherein the adjusting step further comprises increasing the transmission rate if the state parameter is larger than a first threshold.

8. The method of claim 6 wherein the adjusting step further comprises

decreasing the transmission rate if the state parameter is smaller than a second threshold.

9. The method of claim 1, further comprising the step of determining whether to use a RTS/CTS mechanism according to the state parameter.

10. The method of claim 1 wherein the characteristic is determined according to a number of time of transmitting the transmitted packets.

11. A method for adjusting a transmission rate of a wireless communication system comprising a transmitter and a receiver, the method comprising:

transmitting a plurality of first transmitted packets at a first transmission rate and a plurality of second transmitted packets at a second transmission rate by the transmitter;

receiving a plurality of first received packets corresponding to the first transmitted packets and a plurality of second received packets corresponding to the second transmitted packets by the receiver;

determining a first state parameter according to at least one characteristic determined by the first transmitted packets and the first received packets;

determining a second state parameter according to at least one characteristic determined by the second transmitted packets and the second received packets; and

adjusting at least one of the first and the second transmission rates according to at least one of the first and the second state parameters.

12. The method of claim 11 wherein the adjusting step is performed according to a comparison result of the first state parameter and a first threshold.

13. The method of claim 12 wherein the adjusting step further comprises increasing at least one of the first and the second transmission rates if the first state parameter is larger than the first threshold.

14. The method of claim 11 wherein the adjusting step is performed

according to a comparison result of the second state parameter and a second threshold.

15. The method of claim 14 wherein the adjusting step further comprises decreasing at least one of the first and the second transmission rates if the second state parameter is smaller than the second threshold.

16. The method of claim 11 wherein the characteristic is determined by a number of the first received packets and a number of the first transmitted packets.

17. The method of claim 16 wherein the first state parameter is a ratio determined by dividing a number of the first received packets with a number of the first transmitted packets.

18. The method of claim 16 wherein the second state parameter is a ratio determined by dividing a number of the second received packets with a number of the second transmitted packets.

19. The method of claim 11 wherein the characteristic is determined according to the signal strength of at least one of the first and the second received packets.

20. The method of claim 11, further comprising the step of determining whether to use a RTS/CTS mechanism according to at least one of the first and the second state parameters.

21. The method of claim 11 wherein the first transmitted packets and the second transmitted packets are transmitted by turns.

22. The method of claim 11 wherein the characteristic is determined according to at least one of the number of time of transmitting the first and the second transmitted packets.